

IN THE CLAIMS:

Please cancel claims 1-5, 9, 10, 36-40, 44, and 45, and amend the claims as follows:

1.-5. (Canceled)

6. (Currently Amended) A cartridge for dispensing a chemical reagent into a plating solution, comprising:

a vessel, wherein the vessel has an inlet and an outlet;
at least one horizontal shelf contained inside the vessel, wherein the at least one horizontal shelf is positioned to hold the chemical reagent and expose the chemical reagent to the plating solution flowing from the inlet to the outlet; and
a porous material disposed in a fluid path defined in the cartridge, wherein a headspace has a height disposed above the at least one horizontal shelf in a range from about 5 cm to about 30 cm, and ~~The cartridge of claim 5,~~ wherein the plating solution flows from the inlet to the outlet via the headspace.

7. (Previously Presented) The cartridge of claim 6, wherein the plating solution is replenished by the chemical reagent.

8. (Previously Presented) The cartridge of claim 7, wherein the chemical reagent comprises a copper source compound selected from the group consisting of copper hydroxide, copper carbonate, copper oxide, copper sulfate, copper phosphate, derivatives thereof or combinations thereof.

9.-40. (Canceled)

41. (Currently Amended) A cartridge for dispensing a chemical reagent into a plating solution, comprising:

a vessel, wherein the vessel has an inlet and an outlet;

a porous material disposed in a fluid path defined in the cartridge, wherein a headspace has a height disposed above the at least one impermeable shelf in a range from about 5 cm to about 30 cm, and The cartridge of claim 40, wherein the plating solution flows from the inlet to the outlet via the headspace.

42. (Previously Presented) The cartridge of claim 41, wherein the plating solution is replenished by the chemical reagent.

43. (Previously Presented) The cartridge of claim 42, wherein the chemical reagent comprises a copper source compound selected from the group consisting of copper hydroxide, copper carbonate, copper oxide, copper sulfate, copper phosphate, derivatives thereof or combinations thereof.

44.-45. (Canceled)